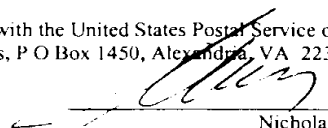


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I hereby certify that this correspondence is being deposited with the United States Postal Service on the date set forth below as First Class Mail in an envelope addressed to: Commissioner for Patents, P O Box 1450, Alexandria, VA 22313-1450.

Date of Signature and Deposit: August 6, 2003

  
Nicholas J Seay

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: James A. Thomson

Date: August 6, 2003

Serial No.: 09/982,637

Group Art Unit: 1632

Filed: 10/18/2001

Examiner: Joseph T. Woitach

For: PRIMATE EMBRYONIC STEM CELLS

Docket No.: 960296.97877

RESPONSE

RECEIVED

Commissioner for Patents  
P O Box 1450  
Alexandria, VA 22313-1450

AUG 13 2003

TECH CENTER 1600/2900

Dear Sir:

In response to the Notice of Non-Compliant Amendment mailed July 3, 2003, the applicant has corrected the prior Response dated June 18, 2003 as follows:

In the Claims:

Please amend Claim 12, withdraw Claims 14-19, and add new Claims 20 as follows:

1.-11. (Cancelled)

12. (Currently Amended) A preparation of ~~pluripotent~~ human embryonic stem cells comprising cells which (i) will proliferate *in vitro* culture for over one year, (ii) maintain a karyotype in which the chromosomes are euploid through prolonged culture, (iii) maintain the potential to differentiate to derivatives of endoderm, mesoderm, and ectoderm tissues throughout the culture, and (iv) are inhibited from differentiation when cultured on a fibroblast feeder layer.

13. (Original) The preparation of claim 12, wherein the stem cells will spontaneously differentiate to trophoblast and produce chorionic gonadotropin when cultured to high density.